A Case Of Recurrent Rupture In Unscarred Uterus

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Abstract - Uterine rupture during pregnancy is an obstetric emergency.Its occurance may implicate a high morbidity and mortality rate in both the fetus and the mother.It is most commonly associated with a history of uterine scar performed for caesarean section,myomectomy or any hysterolaparoscopic procedure followed by multiparous patients with inadvertent use of oxytocics or obstructed labor. Upper segment uterine rupture is extremely uncommon before the onset of labor and in primigravida women.In our case, the patient had fundal rupture in first pregnancy at 26 weeks of pregnancy followed by spontaneous fundal rupture at 29 weeks in second pregnancy.

Index terms - Pregnancy,Recurrent uterine rupture,Unscarred uterus,Obstetric hysterectomy

Introduction

The uterine rupture during pregnancy is a catastrophic entity resulting in maternal and perinatal morbidity and mortality. In patients with previous lower segment cesarean sections, the risk of uterine rupture is estimated up to 0.8- 1%.[1-2] and that of classical caesarean section is 4-9%.

Rupture of unscarred pregnant uterus is rare event,estimated to occur 1/5700 to 1/20000 pregnancies.The incidence of rupture in unscarred and scarred uteri was 0.7 and 4-5 per 10000 deliveries repectively, although rupture of unscarred uteri accounted for 13% of all the ruptures.

However, uterine rupture at the site of previous iatrogenic perforation which is spontaneously healed or repaired is less reported.

We present a case of uterine rupture occurring twice in the same patient, both during her antepartum period.

Case report

A 26 years old woman, G2P1IUFD1, married for 7 years with 29 weeks of gestation presented with pain in abdomen and vaginal bleeding which soaked one pad. The patient was a referred case from private hospital for antepartum rupture with shock. Patient has a history of diagnostic hysterolaparoscopy, although no reports are available.

She has a history of similar presentation in first pregnancy at 26weeks at another hospital. She presented with abdominal pain and vaginal bleeding with tensed 26weeeks size uterus on examination and usg s/o rupture uterus. Emergency exploratory laparotomy was done. There was a transverse tear on the posterior fundal surface, 6-7 cm in length. The edges were not bleeding.There was a hemoperitoneum of 600-700 cc with 480gms clot. The tear was sutured in 3 layers.Post operative course was uneventful.4 units blood ,4 units FFP were given.

In this pregnancy, the patient had regular antenatal checkup at another clinic and was advised planned LSCS.On presentation, the patient's general condition was fair, vital parameters were unstable-tachycardia with hypotension ,and mild pallor. On abdominal examination, the uterus was 29 weeks and tonically contracted. Fetal heart sounds were absent. There was an infra-umbilical vertical scar. On vaginal examination, os was closed and bleeding was present. Ultrasonography (USG) showed a 29-30 weeks IUFD with placenta and fetus in peritoneal cavity .Gross haemoperitoneum with 6*7 cms clots in right iiac fossa noted.Uterine rupture was confirmed and patient and relatives were counseled. Consent for exploratory laparotomy with suturing of the uterine rent and subtotal hysterectomy if required was obtained. Emergency exploratory laparotomy was done. A hemoperitoneum of700 ml with 200 g clots was present. A female fetus of 1.12 kg was lying in the peritoneal cavity. A transverse fundal rupture of 7-8 cm was noted . The placenta had separated and was in the process of expulsion into the peritoneal cavity. The fetus and placenta were removed. The uterus contracted. There was no active bleeding from the uterine rent. Adhesions between posterior surface of uterus and intestines were seen and theyrequired adhesiolysis. Bilateral tubes and ovaries were normal. Subtotal hysterectomy was done as the rupture edge was ragged and it was recurrent rupture in the upper segment.

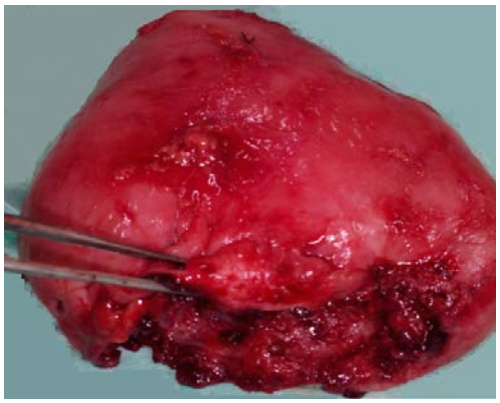

Figure1: Subtotal hysterectomy specimen. Fundal rupture is s een with ragged edges.

The patient was given 4 units of fresh frozen plasm a and four units of blood transfusions. Postoperative course was uneventful. She was discharged on postoperative day 10

Discussion

Lower segment uterine scars tend to give way in lab or and the upper segment scars during pregnancy. The secon d common cause is myomectomy scars.[3] Scar of previous ut erine perforation which occurs as a complication of minimall y invasive procedures such as hysteroscopy, dilatation and c urettage and others is not even considered as a minor cause of uterine rupture during pregnancy.[4] The risk of uterine rup ture depends on the location of the scar. The general risk for t he rupture of an upper segment scar is 4% to 19%.[1] Uterine p erforation is one of the most frequent complications of operat ive hysteroscopy, with an incidence of 0.7-3%. Uterine perfor ations occur most frequently during operative hysteroscopic procedures - mainly adhesiolysis, followed by myomectomy and septum resection, but can also occur during insertion of t he hysteroscope.[5,6]

To provide more insight in the possible risk factors for prelabor UR in primigravid women, we performed a revi ew ofthe literature(Table). In almost half ofthem,partialwall d efect was the principal recognizable risk factor for UR beforet he onset of labor.

It is interesting to note that women with specific av ailableinformation had a history of infertility. Apossible expl anation could be that infertile patients more frequently unde rgo diagnostic/operative procedures on their uterus during di agnostic investigation ortreatment resulting in a likelihood of iatrogenic damage.

We propose that her uterus must have been injured primarily during the hystero-laparoscopy procedure or with an accompanying dilatation and curettage 10 years ago even t hough no operative records are available for the same. This si te in the upper segment most likely healed inadequately with fibrosis. The scar probably gave way in the antenatal period resulting in a IUFD. This hypothesis is based on the operative notes stating that the rupture edges appeared old and they w ere not freshly bleeding. The repeat rupture occurred spontan eously at 29 weeks.

Literature has documented that upper segment scar s rupture in antenatal period remote from labor. Her second pregnancy uterine rupture was similar. These scars rupture i n a quiet uterus. The factors that may affect wound healing like method used formyometrial hemostasis and to close the myometrial defect, an actively contracting and retracting up per segment, the extent of local tissue destruction, the presen ce of infection or hematoma formation, individual healing ch aracteristics may have contributed to poor scar integrity.[7] Du e to high probability of repeated rupture of the uterus in futu re pregnancies a subtotal hysterectomy was done in this patie nt.

Author	Year	Age	H/O Infertility	Gestational age	Risk factors	Hysterectomy
Kazandi(8)	2003	29	No	39	Placenta previa	Yes
Asakura et al (9)	2004	31	Yes	35	Myomectomy	No
Banas et al(10)	2005	31	Yes	35	Myomectomy	No
Wada et al(11)	2006	34	Yes	30	Adenomyomectomy	No
Ajog(12)	2011	41	Yes	35	Perforation during hysteroscopy	No

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